

IN THE CLAIMS:

Please amend claims 1-18 as follows.

1. (Currently Amended) A method for testing visibility of graphics primitives, ~~which said method comprises comprising~~ the steps of:

computing the geometry of graphics primitives;

testing the visibility of the computed primitives in ~~the~~ a first visibility test;

~~based on said first test~~ storing the occlusion data of the visible primitives for a next comparison based on said first visibility test; and

computing the occlusion ~~eulling~~ data for each visible primitive;

~~characterized in that the method further comprises steps:~~

collecting said stored primitives to an occlusion ~~eulling~~ data buffer;

testing the visibility of the collected primitives in ~~the~~ a second visibility test with said computed occlusion data; and

~~rasterizing~~ rasterising visible primitives of the second visibility test.

2. (Currently Amended) The method according to claim 1, ~~characterized in that~~ further comprising the steps of discarding ~~the~~ hidden primitives of the first visibility test.

3. (Currently Amended) The method according to claim 1, ~~characterized in that~~ further comprising the step of storing Z values to an occlusion fusion cache while computing occlusion.

4. (Currently Amended) The method according to claim 1, ~~characterized in that~~ after said first visibility test, collecting occlusion data of the visible primitives belonging to the frame to be rendered to the occlusion ~~eulling~~ data buffer.

5. (Currently Amended) The method according to claim 1, ~~characterized in that~~ wherein after said visibility test, collecting a predefined

amount of occlusion data of the primitives to the occlusion ~~ulling~~ data buffer.

6. (Currently Amended) The method according to claim 1, ~~characterized in that~~
further comprising the step of compressing the occlusion data buffer.

7. (Currently Amended) The method according to claim 1, ~~characterized in that~~
~~the method further comprises~~ comprising the step of testing visibility of the an object before
the geometry processor by a bounding volume method.

8. (Currently Amended) The method according to claim 1, ~~characterized in that~~
further comprising the step of testing the visibility of the primitive in the first and the second
visibility test with low resolution Z-buffer.

9. (Currently Amended) A system for testing visibility of graphics primitives,
~~which system further comprises;~~ said system comprising

a Geometry processor (20);

a Z-buffer component (21);

a first visibility test module (22);

an occlusion fusion unit (23); and

a pixel processing means (26) ;

~~characterized in that the system further comprises:~~

an occlusion data buffer (24); and

a second visibility test module (25);.

10. (Currently Amended) The system according to claim 9, ~~characterized in that~~
wherein the first visibility test is arranged (22) to discard hidden primitives.

11. (Currently Amended) The system according to claim 9,
~~characterized in that~~ wherein the occlusion data buffer (24) is arranged to
collect occlusion data of the primitives belonging to the frame to be rendered.

12. (Currently Amended) The system according to claim 9, ~~characterized in that~~ wherein the occlusion data buffer (24) is arranged to collect a predefined amount of occlusion data of the primitives.

13. (Currently Amended) The system according to claim 9, ~~characterized in that~~ ~~the system~~ further ~~comprises~~ comprising means for compressing (29) and decompressing (212) the occlusion data buffer (24).

14. (Currently Amended) The system according to claim 9, ~~characterized in that~~ ~~the system~~ further ~~comprises~~ comprising means for bounding volume testing.

15. (Currently Amended) The system according to claim 9, ~~characterized in that~~ ~~the system~~ further ~~comprises~~ comprising an occlusion fusion cache.

16. (Currently Amended) The system according to claim 9 15, ~~characterized in that~~ wherein the Z-buffer connected to the first visibility test module is a low resolution Z-buffer.

17. (Currently Amended) The system according to claim 16,
~~characterized in that the system~~ further ~~comprises~~ comprising a high resolution Z-buffer connected- to said second visibility test.

18. (Original) The system according to claim 16, ~~characterized in that the~~ values stored to the low resolution Z-buffer are calculated in the occlusion fusion cache.